A TREATISE ON WET DOCKS, QUAYS, AND *WAREHOUSES*, FOR THE PORT OF LONDON; WITH HINTS RESPECTING TRADE.

LONDON:

Printed for J. JOHNSON, St. Paul's Church-yard, and W. RICHARDSON, under the Royal Exchange.

1794.

[Price ONE SHILLING.]

[This Pamphlet was printed for private circulation only; but having excited the attention of Merchants, Ship Owners, &c. is now published for general information].

CONTENTS.

Page

1 *General Hints, &c.*
4 *The Plan for Wet Docks for loaded Ships.*
7 *General Advantages.*
8 *Neceſſity of an extenſion of the legal Quays.*
12 *Opponents, Claimants, and Compenſation.*
12 *Cuſtoms and Exciſe.*
14 *City of London.*
16 *Wharfingers, Landlords, &c.*
17 *Compenſations.*
18 *Funds for making Docks, &c.*
18 *General Obſervations and Hints on the extenſion of Commerce.*

APPENDIX.

21 *Statements of the Commerce of London and England.*
22 *Revenue.*
23 *Shipping.*
24 *Weſt-India Trade.*
25 *Combinations.*
26 *Ships and Dock duties at Liverpool.*

PREFACE.

THE following obſervations were drawn up for private communications. For convenience, ſome copies have been printed, to circulate in private channels where they may be thought uſeful. The object has been to remove prejudices, to quiet claimants, and to unite great leading and commercial intereſts in an application to Parliament for the creation of Docks, as one of the beſt ſecurities and encouragements to our commerce, and proſperity to our country.

The growing diſtreſſes in the port of London require ſome remedy, and there never was a better opportunity than the preſent, for mercantile and city intereſts to join in an application. If private meetings were formed to propoſe and digeſt plans, and alſo to influence leading intereſts in favour of them, government would not be adverſe to improvements, and their ſanction would leſſen oppoſition.

The propoſed ſchemes are ſubmitted with deference, and will be found, perhaps on the whole, to unite the greateſt number of benefits with the feweſt inconveniences, and finally, with the leaſt expence. If otherwiſe, it is hoped that the neceſ-

ſities

ſities of the times will give birth to a more uſeful and a more ſucceſsful plan, and one that will be adequate to our growing and our preſent wants. It ſhould, however, be obſerved, that no ſcheme on this ſubject can be good, that does not comprehend *new quays as well as new warehouſes*. Any Map of London will ſhew the ſmall extent of legal quays from London Bridge to the Tower, the little that can be added to them; and alſo the advantages of the propoſed docks, from their great vicinity to the ſeat of commerce.

It may be here remarked, that no predilection, whether ariſing from intereſt or favour, is entertained for any ſpecific plan; it being intended as much as poſſible to convey general principles applicable to *any plan*, and to ſhew that neceſſity calls for ſome change, and that it cannot take place too ſoon.

The tables in the Appendix, notes, &c. have been formed from public documents, or from reſpectable private channels. The accuracy of the informations of the latter cannot be queſtioned, and to them many acknowledgments are due.

London, Dec. 14, 1793.

GENERAL HINTS, &c.

THE ſituation of London is inland, and convenient to internal intercourſe. The navigation of the Thames is extenſive, and affords a ſafe and commodious harbour, or floating-tide-dock for ſhipping, for ſome miles. Formerly, it only needed ſmall craft to load, or diſcharge the ſhips that frequented the port; but London has now far outgrown its accommodations, and with an external commerce, infinitely greater than it had at the great fire in 1666, (having perhaps near three fifths of the trade of the whole kingdom,) it poſſeſſes only the ſame legal quays which it did in Charles the Second's time. They cannot be eſtimated at more than *four teen hundred feet*, or little more than one quarter of a mile on one ſide the Thames, *beginning at London-bridge, and ending at the Tower*; while the city of Briſtol commands more than *four thouſand feet*, or four fifths of a mile on the rivers Avon and Frome, though with a trade beyond all compariſon inferior.

All agree that the legal quays are too ſmall; and the very remedies and indulgencies that have been applied from time to time, of ſhipping and landing certain goods at other than the legal quays, by ſufferances (ſatisfying the officer for extra duty), are the ſtrongeſt proofs of the exiſtance of the evil. Perhaps near three fourths of our imports and exports, as to *bulk*, are managed by water, or ſufferance wharfs, and not at the legal quays. The utility and neceſſity of ſufferance wharfs, have been tried and admitted,

mitted, without detriment to commerce, revenue, and the legal quays. Theſe remedies, extenſive and habitual as they have become to many, if not to almoſt all of our moſt bulky articles of commerce, are not however at preſent adequate to our wants.

While other branches of commerce have met with ſome, or with general relief, by an extenſion of wharfs, the WEST-INDIA trade has been for years labouring under the ſevereſt burthens from delays, charges, loſſes, and plunderage. Except the article of woods, that trade, notwithſtanding its great increaſe, has continued for about 130 years in the ſame track. It is therefore neceſſary from increaſed imports, and the growing impediments to commerce in all its branches, to apply ſome remedy; and none can be more effectual than the creation of DOCKS and QUAYS, with an extenſion of warehouſes*.

LIVERPOOL owes every thing to its docks and ſpirit of enterprize. Its town and corporation, have not only entered into them with great ſpirit and ſucceſs; but they have been laying out large ſums in improvements in ſtreets and buildings. In 1792, there were no leſs than 4,483 ſhips which entered into their docks, producing a dock revenue of £.13,243 17*s.* 8*d.* their ſhips meeting with immediate diſpatch in outfit, loading, and diſcharge †.

HULL is alſo much indebted to its dock, commanding

* See Appendix, D. for the ſtate of this valuable trade.

† The dimenſions of theſe Docks, beſides three dry, and five Graving Docks, are

	Long		Broad		Size of Dock Gates.	
	in Yds	in Feet	in Yds.	in Feet.	Clear Width.	Depth.
George's Dock	246	738	100	300	38. 3.	26. 2.
King's Dock‡	272	816	§95	285	42	26
Queen's Dock	280	840	§120	360	42	27
Old Dock	195	585	§85	255	33	25. 3.
Salthouſe Dock	§213	663	102	306	34	
Duke of Bridgewater's Dock					41	26

§ On an average.

† A plan is at this time before the Dock Committee, for altering and enlarging the preſent docks, and for erecting additional new ones. It is propoſed to increaſe the width of the King's and George's Dock, to the width of 120 yards *at leaſt*. The King's Dock will hold ninety veſſels of 200 and 400 tons, and will accommodate twenty-eight to load, and unload, at the ſame time. The other docks are in proportion. In the appendix F. there is an account of the number of ſhips and dock revenues from 1753 to 1793.

an

an extenſive commerce. Ships in the river pay, as well as thoſe in the dock *. It is at this moment under conſideration, even to erect *two* further docks, and to communicate them with the river Humber.

BRISTOL has a ſmall dock; but in general, its ſhipping frequent the river, and lie dry every ebb tide: to avoid which, it has been for ſome time in contemplation to make the whole river Avon, a perpetual wet dock.

GLOUCESTER is now making a large navigable canal from thence to the river Severn, for ſhips of three hundred tons burthen. The diſtance is about twenty miles, the breadth about ſeventy feet, and the depth about eighteen feet and half.

HAVRE DE GRACE poſſeſſes ſeveral large wet docks, on very extenſive ſcales †. They are now making one or two more in the ſame magnificent ſtyle, that may each contain 160 or 170 ſhips a time.

OSTEND forms a bad harbour, but poſſeſſes a large noble wet baſon: It is capable of holding a great number of ſhips at a time.

CHERBOURG is alſo another inſtance of great public exertions for public utility, in order to make a ſafe and commodious harbour for the largeſt ſhips, and even fleets.

LONDON, though the firſt city for commerce, and poſſeſſing within itſelf the moſt powerful internal means of ſupporting docks on the moſt extenſive plans, has been the laſt, except in the caſe of two ſpirited individuals, to try the experiment ‡. With the example and experience of other cities and countries, London is capable, from ſituation, to take the lead in docks, with as much diſtinction and pre-eminence, as ſhe does in the extent of her commerce. Situations are to be found on the river, capable

* Hull Dock contains 48,188 ſquare yards, or nearly ten acres of ground. It is about 480 yards, or 1440 feet long, and 88 yards or 264 feet broad, and has accomodated 130 ſail of ſuch veſſels as frequent the port.

† The exact dimenſions of theſe docks that are compleated, cannot at this moment, be given with great accuracy; but they may be about the following ſizes.

The *Old Dock*, about 650 feet long, 160 broad, contains about forty ſhips, or perhaps fifty ſail, if freed from ſmall craft.

The *New Baſon*, 1900 to 2000 feet long, 300 feet broad, holding about 160 good ſized veſſels at a time. The depth of water at neap tides is about fourteen feet; at ſpring tides, twenty feet and upwards.

‡ Mr. Perry's dock at Blackwall, and Mr. Wells dock at Greenland-Dock; the one ſtanding on about twelve acres of ground, the other on about eight acres, and they can each contain a great many ſhips.

of making *Wet Docks* of any ſize, for loaded, and for light ſhips. In the point of choice, thoſe ſhould be preferred which would in the firſt inſtance unite the moſt immediate benefits, and leſſen the oppoſition of intereſts and of prejudices. Experiment will confirm the utility of them, and when one has once been made, others in time will follow. Difficulties will preſent themſelves to every ſcheme, but no inconvenience can be againſt any ſo ſtrong, as the great burthen and diſadvantage which the Commerce of London ſuſtains from the want of an extenſion of quays and wet docks. It is ſincerely to be wiſhed, that contending intereſts in favour of particular ſpots, may not cauſe a miſcarriage in the firſt outſet, but join to put the ſyſtem in motion, as the growing commerce of London will be found capable of adopting all of them.

THE PLAN FOR WET DOCKS FOR LARGE SHIPS.

THERE is a large plot of ground, which, from the lowneſs of its ſituation, and its vicinity to the river and to the ſeat of commerce and conſumption, is capable of forming one or ſeveral large wet docks, with wharfs, warehouſes, and accommodations, on the moſt extenſive ſcale, for the reception of veſſels of three hundred and four hundred tons, to diſcharge their cargoes with ſafety and diſpatch, without the aid of lighters and craft.

Its ſituation is in a hollow way, between Radcliffe Highway and Wapping. It extends in length, from about Nightingale-lane to New Gravel-lane; the diſtance being perhaps, about 1045 yards, or 3130 feet; and in breadth, from Pennington-lane to about Green Bank in Wapping, being about 583 yards, or 1600 feet. The ſpace contained in it is not greatly inferior to the total extent of the docks at Liverpool.

If Embankments and houſes did not prevent it, this ſpot at preſent would be overflowed by the tide. It is moſtly an uncultivated waſte, and much of the reſt is laid out in gardens and gardeners grounds, being interſected with but few ſtraggling buildings; all of them ſmall, ſome new, but moſtly old, bad in condition and fame, and of little value.

There is there already, a *vacant ſpace unoccupied* by any buildngs, large enough for an extenſive dock and warehouſes of large dimenſions, upon pulling down a few ſtrag-

ling

ling houſes: and if there was due encouragement, by the removal of a few inferior ſtreets that are interſected with gardens and with rope-walks, there would be room for ſeveral docks of large dimenſions, with every accommodation for wharfs and warehouſes, &c. and be capable of being inſulated by walls and ſurrounded by roads, and the *whole tending towards* the city.

The *depth of water* in the adjoining part of the river, is equal to ſhips of any burthen that paſs Deptford. If neceſſary however, a ſmall projection might be made on the banks of the river, (which are always dry at low water). This projection would not intercept the navigation of the river, which is generally limited to mid-channel; and within this projection, a paſſage might be dug leading from the river to the docks. Bell Dock, and places adjacent, would afford conſiderable depth of water for the paſſage; and (except by cutting through Wapping-ſtreet at right angles,) Wapping would only be diſturbed by the ſacrifice of a few ſmall and retired houſes.

Perhaps another entrance might be practicable at no great expence into the Thames from Blackwall, through the Iſle of Dogs. It would ſave a long and troubleſome navigation round the Iſle of Dogs, which is now accompanied with delays from wind and tides. It would alſo avoid the Pool, and leave the river freer for navigation and mooring; leſſen accidents, ſave the expence of chains, the wear and tear of anchors and cables, and prevent robberies from river pirates. This cut might be ſo made, as even to aid the navigation of thoſe ſhips that intend to moor in the river.

Docks and Warehouſes might be extended according to wants and funds. Particular lines of commerce might be kept, as much as poſſible together; and warehouſes and vaults might alſo, for convenience and ſafety, be ſubdivided for the reception of bonded commodities, &c. under the ſame regulations as at preſent.

Large and commodious docks and warehouſes might be further made alſo at the *Hermitage* and at *St. Catharine's*, having communications with the wet docks, and with the river. The lands lie low, having every accommodation for quays, warehouſes and cranes, on an extenſive ſcale; and are equally capable of inſulation to prevent fires and plunder. In theſe two diſtricts alſo, are many waſte ſpots, gardens, and ſquares; the whole comparatively ſpeaking, having but a very few intervening houſes, or ſmall ſtreets and courts,

and

and thoſe moſtly bad in fame and condition, and of little value. There are already there two inlets from the river. At ſpring tides, ſhips of any ſize might be made to enter through at St. Catharine's and at the Hermitage; and at neap tides, it would be open for the reception of veſſels, and craft, of 100 and 150 tons †.

As the Eaſt-India Company have warehouſes of their own in different parts of London, and only want cranes and quays to land, and to ſhip; permiſſion might be granted them to build wharfs, within a circuit of walling, ſubject to the ſame management and controul as at preſent. As the Company cart away, and warehouſe their goods at their own premiſes under the lock of cuſtoms and exciſe, and never pay duties but on delivery of their goods after their public ſales; ſuch a meaſure would give great relief to the legal quays. The Company took up in 1792, forty-three ſhips of above 37,500 tonnage, and in conſequence of the renewal of their charter, are extending their commerce: they have already taken up forty-four ſhips of 39,527 tonnage for 1793, and more are expected to be engaged.

THERE are *two other plans* for docks, which are in themſelves reſpectable, and are accompanied with many *natural advantages* for the immediate reception of ſhips, and the diſcharge of their cargoes, viz. the Iſle of Dogs, and Rotherhithe; but they are ſubject to ſome difficulties on account of diſtance, riſque, expences and delay of *after cartage, and river navigation*; and theſe, are independant of powerful oppoſing intereſts. Either, or both theſe ſpots, might be made the receptacle for colliers, timber ſhips, whalers, and light veſſels, &c. The three firſt might diſcharge their cargoes with no other expence than dock duties; without waiting for craft, and without the neceſſity of warehouſes, or at leaſt of expenſive ones. —Theſe docks would alſo give to London a conſtant and ſteady ſupply of coals; and leſſen the neceſſity of *ſtore craft* which ſo frequently impede and interrupt the navigation of the river, both above and below bridge. They would alſo eaſe the pool of a perpetual fleet of colliers, and leave the river freer for navigation and mooring. The annual

† Theſe two ſpots are already made uſe of as warehouſes and ſufferance wharfs, for the reception of a conſiderable portion of the trade of London. They are nearer to the Tower than ſome of the legal quays are to the Cuſtom-houſe and Tower.

import

importation of coals to London, is about 800,000 chaldrons, forming about 3500 cargoes.

A SUMMARY OF THE GENERAL ADVANTAGES.

THESE docks would treble the preſent diſpatch given at the legal quays, and all the conveniences flowing from thence.

They would be central to the city; to the cuſtoms; to the exciſe: to merchants, tradeſmen, brokers, and coopers: alſo to inſpection, ſale, delivery, and conſumption: they would not diſturb the preſent ſeat of commerce as to reſidences, and employments dependent upon ſhipping; or the ſituation of manufactures eſtabliſhed near the landing of thoſe merchandizes that are large and bulky; ſuch as rope-walks, and ſugar-houſes, lying on the eaſt ſide of London, which compoſe more than one half of thoſe houſes in London.

If the docks were inſulated with walls, and under regulations, they would give convenience and ſecurity to property; control and convenience to the revenue and its officers, owing to their compactneſs; and they would at once ſtrike at the root of all thoſe illicit practices which plunder the proprietor, and defraud the revenue; and alſo greatly check thoſe receiving houſes and cellars up and down the river, which form ſo great a part of our river plunderage.

They would give room and diſpatch for the coaſting traders, and alſo invite coaſters to frequent the London, or north ſide of the river: and as commerce increaſed, coaſters would multiply. The docks would alſo but little derange the internal intercourſe of the traffic of London, Weſtminſter, or Southwark, or the land carriage into the country. In many caſes, the town cartage would be even nearer than at preſent; and the increaſe of it to diſtant parts, would ſcarcely, on an average, increaſe the rate above ſix-pence or a aſhilling per load.

They would be near the ſeat of commerce and buſineſs, and as ſuch, would rather have a tendency to combine leading intereſts to favor theſe improvements, than to oppoſe them.

The ſpots *firſt mentioned* for docks are inland and healthy, and free from the fogs and exhalations of the river. They

are

are ſurrounded by habitations, where fires would add dryneſs to the atmoſphere, and in ſome meaſure leſſen the humidity accompanying colder and damper ſituations. Excluſive of health, damp ſituations alſo greatly influence the appearance, value, and condition of ſeveral ſpecies of merchandize, and particularly thoſe that eaſily diſſolve; a loſs which cannot be eſtimated; but which is ſo great, as to be inconceivable to perſons unexperienced in the fact.

From ſhips and craft moving only with the ebbing and flowing of the tide, one half of the *working hours* on the river are in a manner loſt; and night-tides are frequently uſeleſs for this purpoſe. From the loſs of time during day light, craft when in the act of tranſit, are either thrown greatly into the time of the night tides, or cauſe delays at night at the quays, as landing of goods can only happen at legal hours. Thoſe who are the beſt informed about the river commerce, know how much dark nights favor dark deeds.

As no lights would be permitted in the docks, or ſurrounding warehouſes, fewer fires would happen there than on each ſide the river; where fires at times have ſpread at low water, from warehouſes to ſhips, and from ſhips to warehouſes, or to other ſhips. Theſe loſſes by fire upon and along the river, are annually to a very great extent. Inſurances of craft, and of merchandizes from the ſhip to the quay are alſo expenſive, from the riſque being great from accidents and loſſes.

Theſe docks and warehouſes would create a fair competition with the legal quays, deſtroy combinations, leſſen rents and charges, and all thoſe evils conſequent to limited ſituations.

THE NECESSITY OF AN EXTENTION OF THE LEGAL QUAYS AND WAREHOUSES.

THE want of room at the legal quays creates delays and expences to ſhipping: Lighters are alſo frequently detained at the quays during a month or ſix weeks, *before* they are diſcharged.

Accidents and loſſes frequently happen to ſhips, craft, and merchandizes, from theſe delays; and property is thus loſt without recompence to the ſufferer, and with detriment to the revenue. In caſe of loſſes, conteſts alſo frequently ariſe about the payment of duties.

Merchan-

Merchandize alſo frequently meets with greater waſte and plunder on board of ſhips, and in the craft, and until houſed, than is occaſioned by the whole voyage. It is further ſubjected to all kinds of weather and damage. Lighters ſhould be made cloſe, as formerly, to guard againſt weather and plunderage.

Wars increaſe theſe impediments by throwing commerce into fleets, which crowd the river ſo much, as not only to claſh with each other, as to landing and markets; but to occaſion additional delays, accidents, and loſſes.

As ſeamen and landſmen become impreſſed, hands grow ſcarce; ſhips loſe their petty officers, confidence leſſens, and wages advance. Cargoes cannot be delivered, but with delay, by a gang of lumpers at 3s. 6d. per day: though frequently fed, they always plunder. In peace, the labour of a ſeamen, or common man, would be 1s. 6d. and 2s. per day.

SEIZURES frequently ariſe from delays, though the merchandize has been duly entered, and duties in part paid; as the merchandize, for want of room on the quays, cannot be landed within the time limited by law, which for wines is twenty-one days, and for rums, coffee, &c. thirty days; while ſhips, from the preſſure of the times, cannot diſcharge their cargoes in two months, and many cannot within three months *.

There is a general complaint of the decreaſe of lighters on the river. The *coal barges* are now made for that trade alone, and form a floating warehouſe; and the barges of the Company of Wharfingers are wearing out, and not to be replaced. Wharfingers are declining lighterage, and lighters are falling into a few hands, and theſe can at any time, as at preſent, create a combination. There are but few lighter builders on the river, and the craft fit for the ſugar trade, are very limited †.

Combinations or diſagreements § between wharfingers and lightermen, landwaiters and merchants, are equally productive of delays and loſſes. A late conteſt in 1791, about poſt entries, occaſioned 1500 hhds. of ſugar to blockade the legal quays for a month or ſix weeks.

* Above five thouſand puncheons of rum were in this ſituation, and liable to ſeizure, if Government had not granted the indulgence that was neceſſary.

† From the growing ſcarcity of timber, it is incumbent to preſerve it as much as poſſible for building ſhips for our external commerce.

§ Vide Appendix, E. page 20.

If the legal quays are *inadequate*, their WAREHOUSES connected with them are far more ſo, as they can accommodate only about 32,000 hhds. of ſugar at a time; and there are not in London ſpare ranges of public warehouſes adequate to the annual importation of ſugar alone, at ſuch a period as this; the annual quantity being from 100 to 120,000 hhds. arriving within about three months of the year, and it has been 131,000 hhds. In peace, the evil though great, is not quite ſo ſenſibly felt. In war time, the Weſt-India trade can more than trebly fill the warehouſes at the quays. The firſt fleet from the Leeward Iſlands, lately brought 35,000 hhds. of ſugar, and the one from Jamaica 40,000. The quays could not houſe more than 6 or 7,000 hhds. of the latter, independent of the arrival of other large fleets from other quarters. In this ſituation, ſhips that were damaged, leaky, or chartered, or that wanted to ſail out again early, were compelled to ſerve as warehouſes with great expences and delays.

Warehouſes have been ſo *crowded*, that ſugars have been piled ſix or eight hhds. high *on the quays*, ſubject to loſs and plunder; and the wharfingers themſelves, are, annually, compelled to ſend away ſugars from the legal quays to places which they hire. It has frequently happened that carts, laden with ſugars, have been detained in the ſtreets for ſix hours at a time in rainy weather. But a ſmall quantity of ſugars are carted away from the quays, by the merchants themſelves.

The Commiſſioners of the Cuſtoms have granted temporary relief exceeding what has ever been remembered; having permitted ſhips to land ſugars at the diſtance of Blackwall, an indulgence never before allowed, but to within limited diſtances. Even theſe indulgencies are inadequate, as many of the ſufferance wharfs are full with the merchandizes of the Baltic, and other fleets.

Calculations have been made of the annual loſſes by plunderage on the Weſt-India produce alone, of above 150,000l. per ann. to the proprietor, and of 50,000l. per nn. to the revenue for the port of London; and if other oranches of commerce were included, it might be eſtimated at a total loſs of near 250,000l. per ann.

Charges, delays, and plunderage, from the above cauſes, have induced the Weſt-India planters to ſend their conſignments to the out ports; which are now, by docks and diſpatch, become in a certain degree the little rivals to the mother city. There is nothing but the weight of capital, conſumption, and vicinity to foreign markets, that ſecure

to

to London its preſent large ſhare of the Weſt-India and ſome other trades. In a general view, this diſtribution of trade to our out ports may ſeem no immediate national loſs; but it ſhould be remembered, that the ſame cauſes which baniſh trade from London to our out ports, may alſo, and in fact do, baniſh it, in many inſtances, to *foreign ports alſo.*

SUFFERANCE wharfs have availed themſelves of the neceſſities of the times, and have in many places charged more than cuſtomary at the legal quays. Another burthen on commerce, and without benefit to the revenue, is the charge of *extra* fees to the officers, for the performance of their *common* duties, at other than the legal quays: and when permiſſion is granted to ſhips to land the whole of their cargoes at a ſufferance wharf, extra fees are demanded from each conſignee to take out a *ſeparate ſufferance* for his particular goods, and thoſe pro rata.

The wharfs and buildings along the river are further inadequate in point of SAFETY to the houſing ſuch valuable importations as ſugar, hemp, &c. There is ſcarcely a year, without great loſſes by fire, and to a very conſiderable amount. Within theſe ten years, near if not above half a million of property has been loſt at the ſufferance wharfs. The loſſes at Speck's and at Davis's wharfs were great, and within this month there has been at Hoare's wharf a loſs of about 2000 hogſheads of ſugar, valued at 80,000l. excluſive of hemp, &c. and other premiſes. The proprietors will not only be loſers of property; but have to pay freight and duties on importation without any return.

The *underwriters* who are one of the moſt uſeful ſupports to our commerce, alſo require that ſome attention ſhould be paid to their ſecurity, that they ſhould not unneceſſarily incur additional riſques in port: Theſe conſiderations alone ſhould weigh againſt any little advantages and privileges from local conſiderations.

The operation and effect of all theſe different embarraſſments are heavy, expenſive and fatal; they throw commerce out of its regular ſeaſons and returns; and prove equally detrimental to merchants, markets, and revenue, from unuſual delays. Commerce and revenue are now become ſo complicated machines, that every attention ſhould be paid to the convenience and credit of the one, as well as to the wants and ſecurity of the other.

OPPONENTS, CLAIMANTS, AND COMPENSATION.

THE limitation of the legal quays is founded on *excluſive right*, which it is incumbent on the public to purchaſe at any rate, and to create a fair competition, by laying thoſe, and the propoſed docks and quays, open to the public, with equal privileges. It would prove the trueſt remedy for all our grievances; whereas other plans would only be palliatives, and the ſame evils would only revive in other forms.

To *purchaſe* excluſive privileges and rights, may be the *eaſieſt means* to obtain the end, and ſilence opponents: commerce and revenue are both equally intereſted in the meaſure, as they both ſuffer more, in a ſhort time, by the conſequences of this growing evil, than would purchaſe the fee ſimple of all theſe excluſive rights.

Commiſſioners might be appointed to receive claims: and compenſation might be decided, as in the caſe of canals, by juries or Commiſſioners, to eſtimate the loſſes ſuſtained. In the preſent caſe, (excluſive of purchaſes of land and expences of docks) compenſation would only be limited to a few claſſes, and be rather requiſite for a loſs of privilege than of property. The great profit of monopoly having ſuddenly accumulated, it lies chiefly in the ſame hands which ſaw it begin, and therefore furniſhes an eaſier means of compenſation, than if it had been transferred to men who had actually paid for the increaſed value of it.

Customs and Excise.

WHEN revenues are once created, they are not to be lightly riſqued for new experiments; but a few conſiderations may be ſtated to prove, that an extenſion of quays would be a gain, without a riſque to the revenue.

Diſpatch would leſſen opportunities and temptations to plunderage, and other ſpecies of ſmuggling, and be productive of great ſavings and of great gains. Without adverting to the extent of ſmuggling, the defalcation to the revenue in the port of London only, from plunderage and from accidents to ſhips and to craft, have been eſtimated, and perhaps without much exaggeration, from 70 to 100,000l. per annum.

The

The change here recommended would be productive alſo of oeconomy to the revenue. In docks above half of the hands would be ſaved in watching, landing, and houſing merchandizes ſubjected to duties and with greater diſpatch; and if we calculate the numbers employed in the river, only in *watching* commodities until landed, and the duties on them aſcertained and paid, or until they are houſed under the king's lock, the proportion will be ſtill greater. This ſaving in expence might go, partly to compenſation, and partly to the addition of land-waiters.

The plans alſo, while they extended the legal quays, would condenſe the commerce of London with more convenience to itſelf, and to the cuſtoms and its officers, than by the preſent mixed ſyſtem of legal quays and wide extended ſufferance wharfs. As to regulations, and checks, though the port of London has fewer indulgences, there are leſs riſques and delays to the revenue, than in other places.

Whether there is an extenſion of docks and quays or not, the increaſe of *landwaiters* is greatly called for; as the delays at the quays are almoſt as much increaſed from the *want* of them, as from the want of quays and warehouſes. The addition of twenty or thirty landwaiters at the rate of 200l. per annum would be an addtional expence of only 4 to 6000l. per annum, a ſum that would ſoon be amply repaid by their ſervices.*

It might be alſo an object of conſideration to land and to bond Rums immediately on arrival, as at the out ports; or to bond them at the ſhip's or importer's expence for thirty days and to make the bond transferable. The demand

* There are annually reported in the port of London 8 or 9000 ſhips including coaſting traders. The ſtation at the legal quays are three:

At the Upper ſtation there are		7 Landwaiters.	
Middle ſtation		9	
Lower ditto		11	
		—	27
At the tobacco warehouſes, ſtatedly		6	
Additional at preſent		2	
On India goods		8	
At the Wood Farm in ſufferance wharfs	9		
Additional	2	11	27
			54

There are ſome ſupernumeraries, beſides landwaiters for the coaſting trade, who occaſionally ſerve the Wood Farm, when ſtationed officers cannot be had.

for

for the commodity will always overcome any little trifling objection or difficulty that may ariſe about the convenience of ſale. The time for landing is limited to thirty days, and the buyer knows how to avail himſelf of it when neceſſity requires the importer to bond. To the public it is of little moment in whoſe hands it lies or by whom bonded, ſince conſumers and exporters will always know where to find it.

The abridgment of holidays, and regulation of hours, would greatly aid theſe improvements, and would operate with great effect in places inſulated like the propoſed docks and quays.

At the docks might be ſtationed officers of buſineſs, inſpection, and controul; with powers of internal management and government, according to circumſtances.

CITY OF LONDON.

THE city of London having charters, ancient uſages and privileges, might make a formidable cry and oppoſition. Its influence is great, and we muſt feel, with reſpect, that corporations have conſtituted the freedom of former times; but from the alteration of circumſtances, a great number of thoſe privileges, now operate as reſtraints, inſtead of advantages. Let however, a due regard be paid to charters from the good they have done; but at the ſame time, let us remember that by *extending our objects*, we may extend thoſe of the city, and give a ſpur to more enlarged and liberal ſyſtems. She may ſoon be convinced, that ſhe *owes more to the facility and extenſion of commerce, than to the reſtrictions of her laws and her cuſtoms.* She might ſtill take the lead in the ſpirit of improvement; and retain the vital principles of her conſtitution, which were intended for the adminiſtration of juſtice, and the protection and encouragement of trade. Her objections to the propoſed plans, will perhaps ariſe more from encroachments on ancient privileges, than from the loſs of territory, revenue, or influence. She has however, with a becoming ſpirit, accompliſhed great internal improvements by the creation and widening of ſtreets, at a great expence, and has ultimately found her advantage in thoſe and other improvements. The city of London has only to extend the ſame ſpirit towards improvements on the river, and ſhe will again find, that on the

the extenſion and ſecurity of her commerce, will depend her greateſt benefits.

If ſhe has privileges injurious to commerce, ſhe may be induced, in any event, to relinquiſh them for an adequate conſideration. As to her revenues on commercial import and export, they are (excepting on coals and corn and wine which cannot be affected by the propoſed improvements) very ſmall; and are to be conſidered, rather as badges of authority, than as incomes. Where they are an object, they may be ſecured; and where they are otherwiſe, they may be relinquiſhed or compenſated for. As to places of patronage, they are very few and ſmall.

If improvements have tended to unite London, its ſuburbs, Weſtminſter, and Southwark into one great capital, the city of London will ſtill remain unrivalled, and reſerve to herſelf, from ſituation and capital, the ſeat of commerce. Weſtminſter muſt always receive her great line of import through her channels; Southwark need create no fear from the extenſion of its country and its coaſting trade; and as to the ſuburbs they are the offſpring of her ſelf. Her ſhipping extends for ſome miles, and both ſides the river are dependent upon her commerce and form the two great ranges of warehouſes for the depot of thoſe bulky commodities which ſhe cannot land and houſe at her own quays and warehouſes. The whole extent of her own territory bordering on the Thames below London bridge is ſmall and confined, and is almoſt wholly occupied by the preſent range of quays and without capability of an extenſion of any moment, and ſuch as the times call for. The mercantile intereſt is a powerful one with government and with the country, both for its commerce and its revenue. Foreigners alſo heavily complain of the embarraſſments of the port of London. Something therefore muſt be done, and there can be little danger in the city uniting with the commercial intereſts for the creation of docks near her own doors, when obliged from neceſſity to depoſit the greateſt part of her commerce wherever ſhe can find wharfs and quays. She may make a virtue of neceſſity, and improve her own wants to her own advantages.

LANDLORDS OF THE LEGAL QUAYS.

THEY are few in number, they poſſeſs eſtates of *inheritance*; and command powerful intereſts. The excluſive privileges of the legal quays have contributed greatly to advance thoſe rents. A compenſation adequate to the fall on advanced rents might be made, either for a term of years, by an annuity, or payment by inſtalments where ſhares in the propoſed docks are not accepted in preference. There is no moment when they could make the change with ſo much probability of juſtice being done to them, as at preſent.

WHARFINGERS.

Theſe only poſſeſs a *leaſehold eſtate*; and their intereſts and advantages ceaſe with their leaſes. From the limitation of legal quays, a competition among the wharfingers to out bid each other in rents, operates as a combination againſt the public; ſince from high rents come high charges, and from confined ſpots, great delays. This claſs cannot be hurt, if compenſation be made them for the loſs of their privilege, or if they have new leaſes on other terms. The legal quays from their convenience, would always command the preference on moderate terms. It is not indeed intended by any plans, to *compel* commerce to any ſpot, or to diſinherit the legal quays, but only to give the public an option; and alſo a remedy in moments of diſtreſs.

GANGSMEN.

Theſe are Porters ſtationed under the wharfingers. They are in general freemen, and pay about 100 to 150l. for their places. They poſſeſs only a *life eſtate*, with funds among themſelves, to ſupport thoſe that are ſuperannuated, &c. Their utility is acknowledged; and their ſituation an employment of confidence. Their numbers may amount to fifty. About five of the wharfs employ men that are not preciſely on the ſame footing as the gangſmen of the legal quays. Their claſs would not decreaſe by any new docks.

LABOURERS

LABOURERS ON THE WHARFS.

They are a *fluctuating claſs of men*, and frequently taken from the ſoldiers in the Tower. They are employed by the job or time, principally by time: they would follow commerce on an extenſion of docks, and find proportional employment.

CARMEN, CARTS, &c

Their employment in paſſing from the warehouſes to the purchaſer of goods would be the ſame, and they would be benefited by any increaſe of diſtance or extenſion of commerce. Their numbers are 420. From the very narrow limited ſituations of Thames-ſtreet, and of the legal quays, there are not only great delays but accidents frequently happen, affecting the lives of men and horſes.

LIGHTERMEN.

Theſe would float with commerce, and feel no injury. From the inability of wharfingers to land goods, craft are frequently detained a month or ſix weeks, or more, without compenſation. An extenſion of quays and warehouſes would diſperſe and liberate their craft, much ſooner than at preſent, and enable them to multiply their little voyages. The extenſion of commerce, and the life given it by diſpatch, would more than recompence the immediate loſs from the partial docking of ſhips. If there was any injury, it might be aſcertained by the commiſſioners. Their numbers are few, and their craft are inadequate. Their apprentices, whoſe times were nearly out, would favor any improvements of a general nature, in order to introduce themſelves into life and buſineſs.

COMPENSATION.

COMPENSATION might ariſe out of various funds, and as revenue and commerce, would be equally benefited; each might apportion a part of its ſavings and improvements for a limited time. This application would be found, with ſome little modification, adequate to ſatisfy the neceſſary annual inſtallments due to the ſufferers, and the burthen would gradually diſſolve with time.

1. The ſavings to the revenue by a decreaſe of needleſs

officers, might be appropriated.

II. The docks and quays might pay ſome conſideration for being legalized as lawful quays.

III. Sufferers might receive certain ſhares in the new docks, in return for their loſſes.

IV. A compromiſe might be made with the legal quays and an additional charge for landing, and ſhipping goods, for a certain number of years. Though this may operate as an immediate tax, it is better to ſubmit to that than to the tax of plunder to ſecure diſpatch. Yet future annual ſavings by docks, from loſſes and plunderage, would be more than adequate to a ſmall tax of 4 or 5000l. per annum for a limited time. Commerce, by paying fewer charges, &c. in the docks than at preſent, might well afford to pay a ſmall additional tax to purchaſe ſafety, diſpatch, &c.

FUNDS FOR MAKING DOCKS, &c.

THE creation of docks, and extenſion of wharfs, are not taken into the eſtimate of a *dead expence*; as the improvements would pay and ſupport themſelves, after the firſt outſet. Individuals if a permiſſion were granted, under public ſanction, would of themſelves, as in caſe of canals, carry them into execution, by private expence, riſque, and management. The city of London, and other public bodies, might be invited to encourage the ſcheme and poſſeſs ſhares, and alſo certain powers in the management. Government as they would be benefited by every extenſion of commerce, might contribute to the undertaking by a gift, or a redeemable loan, having the premiſes and rents mortgaged as a ſecurity, or they might render aſſiſtance in various other ſhapes. The power of framing regulations of the docks, &c. might be veſted with Commiſſioners or Truſtees, as in the Ramſgate harbour truſt. Some materials might be found on the ſpot to leſſen expences, particularly bricks; which ſhould be made of particular dimenſions, adapted to the works.

GENERAL OBSERVATIONS AND HINTS ON THE EXTENSION OF COMMERCE.

THERE needs but one general reply to all the apprehenſions that may ariſe from the fear of throwing hands, and profeſſions, out of employment. Prejudices

were

were once applied againſt canals, turnpike roads, and the uſe of machines in manufactures; but canals have extended old, and created new markets, without decreaſing ſeamen, or the coaſting trade; turnpike roads have given improvements to agriculture, and convenience to markets, and to travellers; machines have given extenſion to manufactures; and we only want *docks, quays, and warehouſes*, to give facility to commerce.

Perhaps ſome may fear the leſſening the river navigation on the Thames, and its importance as a nurſery for our ſeamen; but the ſame objection might have been applied to the building of the bridges. The extenſion of commerce, is the ſureſt means of creating, and encouraging our ſeamen. While we have commerce and navigation, we ſhall never want hands. It is from thence that a thouſand little ſprings and rivulets will flow, to give employment and fertility to induſtry. Deſtroy commerce, and the whole tribe of watermen would ſoon dwindle again into inſignificant river fiſhermen. Liverpool has no river navigation, and yet never wants ſeamen.

If London and Great Britain could be made the grand depot of merchandize. and if goods were bonded under the King's lock, until taken out for home conſumption, it would throw the capital of the merchant into his commerce, and leave the revenue to take the benefit of it, at the moment of conſumption; for commerce is the parent of revenue. This ſyſtem is already adopted without detriment, in the Eaſt-India trade for teas, China, ſilk, ſugar, &c. alſo in the articles rum, tobacco, coffee, &c. If this reaſoning be true, the extenſion of docks, &c. would favour any general ſyſtem of bonding, and under thebeſt regulations*.

* The Committee of the Houſe of Commons for preventing the illicit practices uſed in defrauding the revenue, recommended, for the accommodation of trade, at the inſtance of the Commiſſioners of the Cuſtoms in Scotland, "That all high duty goods be warehouſed at importation, in "warehouſes to be provided, to the ſatisfaction of the proper officers, at "the importers expence, and under the joint locks of the King and the "proprietor; ſubject only to the payment of duties for the ſame, when "taken out of the warehouſes for home conſumption; and that if taken "out for exportation, the ſame to be delivered, free of all duties whatever. "The extenſion or permiſſion to be granted for three years."—"That un-"der the preſent ſyſtem, much diſtreſs frequently ariſes from the want of "ready money to ſatisfy the duties at the time of importation, and various "artifices are made uſe of to obtain drawbacks fraudulently, by which there "can be no doubt that the revenue ſuffers conſiderably; probably more "than it gains by the ſums retained at preſent, for goods intended to be "exported."——Third Report of the Commiſſioners, 23d March, 1784.

Holland

Holland owed much of its proſperity to eaſy duties. It was a country without national products, and had nothing but this ſyſtem of becoming a general depot, to create induſtry and capital. By making that country an univerſal warehouſe for an exchange of commodities, they ſold them on terms almoſt as cheap as they could be procured at the place of their growth.

As to *England*, ſhe is the greateſt conſumer of her own products, and imports; and what ſhe exports of native or foreign commodities, is commonly enhanced by the additional induſtry and labour of its inhabitants. But as we are extending our ideas of commerce in the Eaſt, and ſeem to have in contemplation extenſive acquiſitions in the Weſt Indies, and as the only two rival commercial nations in Europe are, from political conſiderations, incapable of great preſent exertions, it would be good policy to look up to Great Britain as the great depot, for all its wants; building proſperity on the beſt foundation, that of mutual intereſts.

Who ever looks at the growing commerce, wealth, and finance, of Great Britain, compared with former times, or with other countries, will view with wonder, the joint efforts of nature and our induſtry in ſpite of all our wars. But when we compare our internal, with our external commerce, and ſee how much they may, or do affect each other, there is no knowing how far liberal ſyſtems of commerce, with pacific principles, and a relinquiſhment of prejudices and privileges, (which are rather burthenſome than productive, and particularly when they reſpect ourſelves) will carry us. Roads and canals are forming all over the country, and in all their communications, they have one general tendency toward the great centre of the kingdom, there to unite by the ſtrongeſt ties.

Induſtry is to property, what education is to the mind, for it creates, and it expands. In agriculture it is befriended by nature; and in art it conbines and multiplies all the powers of mechanics, particularly when backed by nature. If then we graſp at great objects, we muſt uſe great means. Archimedes only deſired to put his foot on one earth, to raiſe another; we need only to open our eyes, ſacrifice our prejudices, and graſp at the ſubſtance inſtead of the ſhadow, and we ſhall then find the ſureſt means of encouraging our induſtry, and extending our commerce to bounds yet unknown.

APPEN-

APPEND X.

The following Statements may convey ſome ideas of the progreſſive Increaſe of the Commerce, Navigation, &c. of England, and of London, reſpectively, at different Periods

VALUE OF IMPORTS AND EXPORTS.

Imports of England.

Years.		Of which for London.	For the reſt of England.
	£.	£.	£.
1697	3.482.586		
1700	5.970.175	4.785.538	1.184.637
1737	7.073.638	5.335.254	1.738.424
1756	7.961.603	5.333.257	2.628.346
1763	11.665.036	8 146.417	3.518.619
1784	14.119.369	10.314.872	3.804.497
1791	17.688.151	12.016.229	5.671.822
1792	17.897.700	12.071.674	5.826.326

Exports of England.

	£.	£.	£.
1697	3.525.906		
1700	7.302.716	5.387,787	1.914.929
1737	11.842.320	7.362.367	4.479.953
1756	12.517.640	8.347.100	4.170.540
1763	16.160.181	9.389.570	6.770.611
1784	14.804.161	8.260.278	6.543.883
1791	21.435.459	12.944.192	8.491.267
1792	23.674.315	14.742.516	8.831.799

Exports and Imports of Great Britain.

		Imports.	Exports.
		£.	£.
1791		19.669.782	22.731.995
1792		19.659.358	24.905.200

1613	The total amount of the Customs of England.			
	At the Port of London Outwards — £. 61.322 16 7			
	Inwards — 48.250 1 9		109.572 18 4	
	At all the Out Ports Outwards — £. 25.471 19 7			
	Inwards — 13.030 9 9		38.502 9 4	£.
	NB Very near three to one in favor of London.			148.075 7 8
1666	The Farm of the Customs of England, as stated by Davenant, was only per ann. — — — —		— — —	390.000
1671 to 1688	The Customs in England produced in 17 Years, as stated by Davenant, £.9.447.797 or on an average per ann. —		— — —	555.752
1700 to 1714	The net Revenue of the Customs in England, on an average of 15 years, was per ann. — — —		— — —	1.352.764
1709	The gross Customs of Great Britain were — —	2.319.320		
	Deduct Drawback, Charges, &c. — —	965.837		1.353.483
1711	The Amount of the Customs received, as stated by Davenant,			
	in the Port of London, — — —	2.319 320		
	Out Ports — — —	346.081		1.614.176
1792	The gross Amount of the Customs for the Port of London, may be estimated at about — — — —	3.580.000		
	Deduct Drawbacks, Charges, &c. — —	1.350.000		2.230.000
1792	The gross Customs of Great Britain may be estimated at about — — — — —		— — —	6 040.000
	The net Customs of ditto, paid into the Exchequer, may be			

B

Anno STATE OF SHIPPING, &c.

1728	Ships arrived in London from Foreign Parts of which were British — — —		1839
	Foreign — — —		213
			2052
	Coasters — — —		6837
			8886
1732	The number of Ships belonging to the Port of London, taken from the Register of the Custom-House, were		
	1417 Ships from 15 to 750 Tons making		178.557 Tons.
	Navigated by 21.797 Men		
	Of these 1 was of — 750 Tons.		
	130 were from 300 to 500		
	83 —— 200 300		
	The remainder under — 200		
1742	The number of Ships employed at Bristol in Foreign Trade, including that to Ireland, were — — — —		400
	At Liverpool do. do. —		300
	NB. Both are exclusive of Coasters.		
1753	The number of Ships cleared from ENGLAND were —— — British	7 57	613.700 Tons.
	Foreign	355	41.254
		8312	654 954
	Of which for LONDON were British	1216	153.969 Tons.
	Foreign	150	26.281
		1369	180.250
1792	The number of Ships cleared out from the Port of London for Foreign Parts were		
	British about		1070
	Foreign		500
			1570
	Of about (and exclusive of Coasters)		399.000 Tons.
1792	The number of Ships belonging to the Port of London were about — —		1860
	Tonnage —		374.000 Tons.
	Of these about 24 were from 500 to 750 Tons		
	260 —— 300 500		
	360 —— 200 300		

STATE OF THE WEST-INDIA TRADE.

Periods.	On an average of years.	Sugar.	Imported into England.
1700 to 1715	15	34.832	Hhds. of Sugar *per annum.*
1715 — 1730	15	60.450	
1731 — 1742	12	68.128	
1743 — 1757	15	76.366	
1764 — 1773	10	122.302	Acquiſition of Iſlands.
1774 & 1775	2	155.800	
1776 to 1783	8	111.769	Years of War, Hurricanes, and loſs of Iſlands.
1784 to 1790	7	145.969	Peace, and reſtoration of Iſlands.
1791	1	138.963	
1792	1	153.018	

WEST INDIA SHIPPING, &c.

	Ships.	Tons.
1792 To England about	550	130.000
Scotland —	85	15.500
	635	145,500

1792	Imported in about Ships.	Hhds. of Sugar.	Puns. of Rum.
To England	550	153.018	27.500
London	285	105.114	15.707
Out Ports	265	47.804	11.793

COMBINATION OF WHARFINGERS IN 1674.

Extracts of a Petition of the Merchants and Traders in London, to the House of Commons, in 1674.

" Sheweth,

" That by the acts and rates made in the reign of King Charles II. as appears in the book of rates, all goods imported from parts beyond seas to the port of London, must be landed at those keys and wharfs only that lye betwixt Tower Dock and London Bridge: And that all goods landed in any other place, without particular licence from the commissioners of the customs, are forfeited; which wharfs and keys were formerly managed by seperate wharfingers."

They complained that the wharfingers " had entered into a combination and partnership to make them all one joint concern, which, if continued, the burdens and losses trade will be subject to by this copartnership, will be intolerable, because

" 1st. The Ships are now twice as long in delivering as they were before this copartnership, by their not employing that number of lighters and lightermen that are necessary, but making the merchants wait, that one lighter may do the business of three; which is a great charge to shipping, as well as an hindrance to our navigation and trade.

" 2d. That the said copartners have also advanced the rates of their wharfage, and rents of their warehouses upon the said wharfs, and they may farther advance them to what rates they please.

" 3d. That when by the carelessness of their servants, or want of due attendance, the lighters are sunk, and the goods perished, or that the goods are stolen out of their lighters, or warehouses." —That they did not know whom to sue, as the copartners were not a coporate body, and that they refused to discover themselves.

What was the result of this business does not fully appear, than that this petition was referred to the Privy Council; and from thence to the Lord Mayor and Aldermen of London. The merchants delivered in the table of rates they had been accustomed to, and which they were willing to give. The wharfingers also delivered in their proposed tables of rates, which was, on an average, very near an advance of three to one on the old rates, and in many cases it was more. The plea for this increase was the great loss by the *fire of London* in 1666, and the rebuilding of warehouses at a great expence, and more convenient than ever. Near 130 years have since elapsed, and there is now the plea of *heavy rents and expences* for an increase of charges. If there were combinations and disagreements in 1674, what must be the evil of 1793!

If it were of moment, other periods of complaint might be stated,

ed, and particularly in the Earl of Bute's adminiſtration, about the year 1763; when the idea of the extenſion of the legal quays was warmly eſpouſed, and taken up by his lordſhip; but the then *landed intereſts of the wharfs, &c. overcame the intereſts of commerce.*

THE

THE PROGRESSIVE INCREASE OF DOCK DUTIES AT LIVERPOOL.

From the Year 1752, ending the 24th of June each Year.

Year	No. Ships.	£.	s.	d.	Year	No. Ships.	£.	s.	d.
1752		1776	8	2	1773	2214	4725	1	11
1753		2034	16	2	1774	2258	4580	5	5
1754		2095	11	0	1775	2291	5384	4	9
1755		2417	13	11	1776	2216	5064	10	10
1756		2187	16	9	1777	2361	4610	4	9
1757	1371	2336	15	0	1778	2292	4649	7	7
1758	1453	2403	6	3	1779	2374	4957	17	10
1759	1281	2372	12	2	1780	2261	3528	7	9
1760	1245	2330	6	7	1781	2512	3915	4	11
1761	1319	2382	0	2	1782	2496	4249	6	3
1762	1307	2526	19	6	1783	2816	4840	8	3
1763	1752	3141	1	5	1784	3098	6597	11	1
1764	1625	2780	3	4	1785	3429	8411	5	3
1765	1930	3455	8	4	1786	3228	7508	0	1
1766	1908	3653	19	2	1787	3567	9199	18	8
1767	1704	3615	9	2	1788	3677	9206	13	10
1768	1808	3566	14	9	1789	3619	8901	10	10
1769	2054	4004	5	0	1790	4223	10037	6	2½
1770	2073	4142	17	2	1791	4045	11645	6	6
1771	2087	4203	19	10	1792	4483	13243	17	8¼
1772	2259	4552	5	4	1793	4129	12480	5	5

FINIS.